appreciably to the labeled product found in the brain, since plasma cholesterol does not appear to be capable of penetrating the brain cells(9). The failure of labeled cholesterol to show a decline in activity during the time-course experiment (72 days) suggests the absence of turnover in the adult rat. However, the possibility of an appreciable re-utilization of C^{14} or a prolonged formation of cholesterol from a reservoir of labeled precursors cannot be excluded.

Summary. Incorporation of C^{14} into brain cholesterol following the intracisternal injection of acetate-1-C^{14} and pyruvate-2-C^{14} has been investigated. Incorporation was observed in both young and adult rats, but the amount of incorporation was much greater in the younger animals. The incorporation with pyruvate was less than that with acetate. Simultaneous injection of pyruvate-2-C^{14} and unlabeled acetate resulted in reduced incorporation of the C^{14} of the pyruvate. No decline in activity of cholesterol was observed during a 72 day period following the labeling of the compound by injecting labeled acetate.

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Effect of Native Dextran on Granulation Tissue Formation.* (23594)

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Lattes *et al.*(1) have suggested that acid mucopolysaccharides may be involved in stimulating the growth of granulation tissue in wounds. Wolman and Wolman(2), on the other hand, have reported that the administration of the neutral polysaccharides levan and dextran inhibited the formation of granulation tissue. We report here experiments designed to re-examine this question. Instead of using skin wounds or intraperitoneal talcum, as used by Wolman *et al.*(2), we have used the more constantly reproducible granuloma pouch(3).

Methods. Rats weighing 230 to 250 g each were used. 25 cc of air were injected subcutaneously into the backs of anesthetized animals. Into this space, 0.5 ml of a 1% solution of croton oil was immediately introduced. Two preparations of dextran were available. The high-polymer preparation (Lot No. 378, supplied by Commercial Solvents Corp.) had an average M.W. greater than 10^7. This was dissolved in 0.85% saline solution at a concentration of 40 mg/ml. The lower polymer preparation (Lot No. 359897, Commercial Solvents Corp.) had an average M.W. of 4×10^5; it was dissolved in saline solution at 60 mg/ml.

Results. In the first experiment, a daily intraperitoneal injection of 1 ml of the high-polymer dextran was administered to 9 rats and 1 ml daily of the lower-polymer solution to 10 rats. Nine control rats were not injected. On the 10th day, the animals were killed and the granuloma pouches removed.

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There were no significant differences in weight or macroscopic appearance of the pouches from the 3 groups of rats. After formalin-fixation, histological sections of the pouches were stained with hematoxylin and eosin, the periodic acid-Schiff procedure (P.A.S.), Mallory's trichrome and Laidlaw's stain for reticulin. Normal granulation tissue with good collagen formation and no evidence of infection was present in all sections. Many foam cells were seen, probably the result of the croton oil injection. No evidence of dextran deposition was found in the P.A.S.-stained sections. No differences of any sort were apparent among the 3 experimental groups.

In the second experiment, 2 groups of 10 rats each were employed. One ml of high-polymer dextran solution was injected directly into the pouches of the experimental group daily for 10 days, while 0.85% saline was similarly injected into the pouches of the control animals. Again, there were no macroscopic differences between the pouches of the 2 groups. The qualitative histological picture was similar in both groups. Normal granulation tissue with good collagen formation was found in all sections; but there was a small quantitative difference in collagen formation between the dextran-injected and control granuloma pouches. The dextran-injected pouches contained somewhat less collagen, without, however, any abnormality in orientation or staining of fibers. Histiocytes with vacuoles containing a few inclusion particles stained by the P.A.S. procedure, probably representing dextran, were noted. No evidence of infection was seen. Since the effect of highly polymerized dextran was slight, no further experiments with the lower-polymer preparation were conducted.

Discussion. These results indicate that, with the experimental conditions used, only a slight reduction in the formation of granulation tissue was achieved, even by the direct application of high-polymer dextran in high concentration. Intraperitoneal injection failed to influence granulation tissue formation in these experiments; poor absorption of the polymer from the peritoneum may account for this. Yet, Wolman and Wolman(2) reported that the growth of granulation tissue into skin incisions in rabbits was retarded following intraperitoneal injection of a very much smaller amount of levan than that of dextran used in the present experiments. In other experiments, using mice, these authors found that by injecting very large doses of levan or dextran intraperitoneally, granulation tissue formation, both in skin wounds and around talc particles in the peritoneal cavity, was inhibited.

It must be remembered when comparing the experiments of Wolman and Wolman with those reported here, that those workers used mice and rabbits instead of rats. In many of their experiments, levan was used, and the intraperitoneal dose in their series was larger than that employed in our experiments by the same route. A final difference is our use of the granuloma pouch, which, as an experimental model, is preferable to a skin wound for assessing granulation tissue formation. However, even the local application of a high concentration of native dextran resulted in only a slight diminution of granulation tissue formation, without apparent qualitative changes.

Summary. High-polymer dextran only slightly inhibited granulation tissue formation when applied directly in high concentration, but not when injected intraperitoneally in rats. No qualitative differences between the granulation tissue of experimental and control groups were observed.

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